

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, in the application:

What is claimed is:

1 1. (original) A method for inhibiting the corrosion of metals embedded in a
2 cementitious material, said cementitious material manufacturable from a process
3 comprising the activities of:
4 manufacturing lithium nitrate; and
5 providing said lithium nitrate for addition to said cementitious material at an
6 effective dosage rate.

1 2. (original) The method of claim 1, wherein said effective dosage rate is
2 between about 0.01 gram moles of lithium nitrate per cubic foot of cementitious
3 material and about 100 gram moles of lithium nitrate per cubic foot of cementitious
4 material.

1 3. (original) The method of claim 1, wherein said effective dosage rate is
2 between about 0.01 gram moles of lithium nitrate per cubic foot of cementitious
3 material and about 0.1 gram moles of lithium nitrate per cubic foot of cementitious
4 material.

1 4. (original) The method of claim 1, wherein said effective dosage rate is
2 between about 0.1 gram moles of lithium nitrate per cubic foot of cementitious material
3 and about 1 gram moles of lithium nitrate per cubic foot of cementitious material.

1 5. (original) The method of claim 1, wherein said effective dosage rate is
2 between about 1 gram moles of lithium nitrate per cubic foot of cementitious material
3 and about 10 gram moles of lithium nitrate per cubic foot of cementitious material.

1 6. (original) The method of claim 1, wherein said effective dosage rate is
2 between about 10 gram moles of lithium nitrate per cubic foot of cementitious material
3 and about 100 gram moles of lithium nitrate per cubic foot of cementitious material.

1 7. (original) The method of claim 1, wherein said effective dosage rate is
2 about 0.815 gram moles of lithium nitrate per cubic foot of cementitious material.

1 8. (original) The method of claim 1, wherein said lithium nitrate is provided as
2 a solid.

1 9. (original) The method of claim 1, wherein said lithium nitrate is provided in
2 an aqueous solution.

1 10. (original) The method of claim 1, wherein said cementitious material is
2 concrete.

1 11. (original) The method of claim 1, wherein said cementitious material is
2 grout.

1 12. The method of claim 1, wherein said cementitious material is mortar.

1 13. (original) The method of claim 1, wherein said cementitious material is
2 pozzalanic cement.

1 14. (original) The method of claim 1, wherein said cementitious material is at
2 least one of cement, grout, mortar, and pozzalanic cement, or any combination thereof.

1 15. (original) A method for inhibiting the corrosion of metals embedded in

2 concrete or any other cementitious material, said concrete or cementitious material
3 manufacturable from a process comprising the activities of:
4 obtaining lithium nitrate; and
5 mixing said lithium nitrate with said concrete or cementitious material at an
6 effective dosage rate.

1 16. (original) The method of claim 15, wherein said effective dosage rate is
2 between about 0.01 gram moles of lithium nitrate per cubic foot of concrete or
3 cementitious material and about 100 gram moles of lithium nitrate per cubic foot of
4 concrete or cementitious material.

1 17. (original) The method of claim 15, wherein said effective dosage rate is
2 between about 0.01 gram moles of lithium nitrate per cubic foot of concrete or
3 cementitious material and about 0.1 gram moles of lithium nitrate per cubic foot of
4 concrete or cementitious material.

1 18. (original) The method of claim 15, wherein said effective dosage rate is
2 between about 0.1 gram moles of lithium nitrate per cubic foot of concrete or
3 cementitious material and about 1 gram moles of lithium nitrate per cubic foot of
4 concrete or cementitious material.

1 19. (original) The method of claim 15, wherein said effective dosage rate is
2 between about 1 gram moles of lithium nitrate per cubic foot of concrete or
3 cementitious material and about 10 gram moles of lithium nitrate per cubic foot of
4 concrete or cementitious material.

1 20. (original) The method of claim 15, wherein said effective dosage rate is
2 between about 10 gram moles of lithium nitrate per cubic foot of concrete or
3 cementitious material and about 100 gram moles of lithium nitrate per cubic foot of

4 concrete or cementitious material.

1 21. (original) The method of claim 15, wherein said effective dosage rate is
2 about 0.815 gram moles of lithium nitrate per cubic foot of concrete or cementitious
3 material.

1 22. (original) A method for inhibiting the corrosion of metals embedded in
2 grout, said grout manufacturable from a process comprising the activities of:
3 obtaining lithium nitrate; and
4 mixing said lithium nitrate with said grout at an effective dosage rate.

1 23. (original) The method of claim 22, wherein said effective dosage rate is
2 between about 0.01 gram moles of lithium nitrate per cubic foot of grout and about 80
3 gram moles of lithium nitrate per cubic foot of grout.

1 24. (original) The method of claim 22, wherein said effective dosage rate is
2 between about 0.01 gram moles of lithium nitrate per cubic foot of grout and about 82
3 gram moles of lithium nitrate per cubic foot of grout.

1 25. (original) The method of claim 22, wherein said effective dosage rate is
2 between about 0.01 gram moles of lithium nitrate per cubic foot of grout and about 100
3 gram moles of lithium nitrate per cubic foot of grout.

1 26. (original) The method of claim 22, wherein said effective dosage rate is
2 between about 0.01 gram moles of lithium nitrate per cubic foot of grout and about 0.1
3 gram moles of lithium nitrate per cubic foot of grout.

1 27. (original) The method of claim 22, wherein said effective dosage rate is
2 between about 0.1 gram moles of lithium nitrate per cubic foot of grout and about 1

3 gram moles of lithium nitrate per cubic foot of grout.

1 28. (original) The method of claim 22, wherein said effective dosage rate is
2 between about 1 gram moles of lithium nitrate per cubic foot of grout and about 10
3 gram moles of lithium nitrate per cubic foot of grout.

1 29. (original) The method of claim 22, wherein said effective dosage rate is
2 between about 10 gram moles of lithium nitrate per cubic foot of grout and about 100
3 gram moles of lithium nitrate per cubic foot of grout.

1 30. (original) The method of claim 22, wherein said effective dosage rate is
2 about 0.815 gram moles of lithium nitrate per cubic foot of grout.

1 31. (original) A method for inhibiting the corrosion of metals embedded in
2 mortar, said mortar manufacturable from a process comprising the activities of:
3 obtaining lithium nitrate; and
4 mixing said lithium nitrate with said mortar at an effective dosage rate.

1 32. (original) The method of claim 31, wherein said effective dosage rate is
2 between about 0.01 gram moles of lithium nitrate per cubic foot of mortar and about 80
3 gram moles of lithium nitrate per cubic foot of mortar.

1 33. (original) The method of claim 31, wherein said effective dosage rate is
2 between about 0.01 gram moles of lithium nitrate per cubic foot of mortar and about 82
3 gram moles of lithium nitrate per cubic foot of mortar.

1 34. (original) The method of claim 31, wherein said effective dosage rate is
2 between about 0.01 gram moles of lithium nitrate per cubic foot of mortar and about
3 100 gram moles of lithium nitrate per cubic foot of mortar.

1 35. (original) The method of claim 31, wherein said effective dosage rate is
2 between about 0.01 gram moles of lithium nitrate per cubic foot of mortar and about
3 0.1 gram moles of lithium nitrate per cubic foot of mortar.

1 36. (original) The method of claim 31, wherein said effective dosage rate is
2 between about 0.1 gram moles of lithium nitrate per cubic foot of mortar and about 1
3 gram moles of lithium nitrate per cubic foot of mortar.

1 37. (original) The method of claim 31, wherein said effective dosage rate is
2 between about 1 gram moles of lithium nitrate per cubic foot of mortar and about 10
3 gram moles of lithium nitrate per cubic foot of mortar.

1 38. (original) The method of claim 31, wherein said effective dosage rate is
2 between about 10 gram moles of lithium nitrate per cubic foot of mortar and about 100
3 gram moles of lithium nitrate per cubic foot of mortar.

1 39. (original) The method of claim 31, wherein said effective dosage rate is
2 about 0.815 gram moles of lithium nitrate per cubic foot of mortar.

1 40. (original) A method for inhibiting the corrosion of metals embedded in
2 cementitious material, said cementitious material manufacturable from a process
3 comprising the activities of:
4 obtaining lithium nitrate; and
5 applying said lithium nitrate to the surface of said cementitious material at an
6 effective dosage rate.

1 41. (original) The method of claim 40, wherein said effective dosage rate is
2 between about 0.01 gram moles of lithium nitrate per cubic foot of cementitious

3 material and about 100 gram moles of lithium nitrate per cubic foot of cementitious
4 material.

1 42. (original) The method of claim 40, wherein said effective dosage rate is
2 between about 0.01 gram moles of lithium nitrate per cubic foot of cementitious
3 material and about 0.10 gram moles of lithium nitrate per cubic foot of cementitious
4 material.

1 43. (original) The method of claim 40, wherein said effective dosage rate is
2 between about 0.1 gram moles of lithium nitrate per cubic foot of cementitious material
3 and about 1 gram moles of lithium nitrate per cubic foot of cementitious material.

1 44. (original) The method of claim 40, wherein said effective dosage rate is
2 between about 1 gram moles of lithium nitrate per cubic foot of cementitious material
3 and about 10 gram moles of lithium nitrate per cubic foot of cementitious material.

1 45. (original) The method of claim 40, wherein said effective dosage rate is
2 between about 10 gram moles of lithium nitrate per cubic foot of cementitious material
3 and about 100 gram moles of lithium nitrate per cubic foot of cementitious material.

1 46. (original) The method of claim 40, wherein said effective dosage rate is
2 about 0.815 gram moles of lithium nitrate per cubic foot of cementitious material.

1 47. (original) A method for inhibiting the corrosion of metals in embedded in
2 cementitious material, said cementitious material manufacturable from a previously
3 heated Portland cement composition, said Portland cement manufacturable from a
4 process comprising the activities of:

5 obtaining lithium nitrate; and
6 admixing said lithium nitrate with said Portland cement composition at an

7 effective dosage rate.

1 48. (original) The method of claim 47, wherein said effective dosage rate is
2 between about 0.01 gram moles of lithium nitrate per cubic foot of cement and about
3 100 gram moles of lithium nitrate per cubic foot of cement.

1 49. (original) The method of claim 47, wherein said effective dosage rate is
2 between about 0.01 gram moles of lithium nitrate per cubic foot of cement and about
3 0.1 gram moles of lithium nitrate per cubic foot of cement.

1 50. (original) The method of claim 47, wherein said effective dosage rate is
2 between about 0.1 gram moles of lithium nitrate per cubic foot of cement and about 1
3 gram moles of lithium nitrate per cubic foot of cement.

1 51. (original) The method of claim 47, wherein said effective dosage rate is
2 between about 1 gram moles of lithium nitrate per cubic foot of cement and about 10
3 gram moles of lithium nitrate per cubic foot of cement.

1 52. (original) The method of claim 47, wherein said effective dosage rate is
2 between about 10 gram moles of lithium nitrate per cubic foot of cement and about 100
3 gram moles of lithium nitrate per cubic foot of cement.

1 53. (original) The method of claim 47, wherein said effective dosage rate is
2 about 0.815 gram moles of lithium nitrate per cubic foot of cement.

1 54. (original) A method for inhibiting the corrosion of metals embedded in
2 cementitious material, said cementitious material comprising a Portland cement
3 composition, said Portland cement composition creatable from a method comprising
4 the activities of:

5 obtaining lithium nitrate;
6 admixing said lithium nitrate with said Portland cement in an amount sufficient
7 to inhibit the corrosion of metals; and
8 heating said material to form a Portland cement clinker.

1 55. (original) The method of claim 54, wherein said sufficient amount
2 provides a molar ratio of lithium to sodium equivalent in the resultant cement clinker
3 of between about 0.01:1 to about 10:1.

1 56. (original) The method of claim 54, wherein said sufficient amount
2 provides a molar ratio of lithium to sodium equivalent in the resultant cement clinker
3 of between about 0.01:1 to about 0.1:1.

1 57. (original) The method of claim 54, wherein said sufficient amount
2 provides a molar ratio of lithium to sodium equivalent in the resultant cement clinker
3 of between about 0.1:1 to about 1:1.

1 58. (original) The method of claim 54, wherein said sufficient amount
2 provides a molar ratio of lithium to sodium equivalent in the resultant cement clinker
3 of between about 1:1 to about 5:1.

1 59. (original) The method of claim 54, wherein said sufficient amount
2 provides a molar ratio of lithium to sodium equivalent in the resultant cement clinker
3 of between about 5:1 to about 10:1.

1 60. (original) A composition comprising:
2 a concrete or cementitious material comprising between about 0.01 gram moles
3 of lithium nitrate per cubic foot of concrete to about 100 gram moles of lithium nitrate
4 per cubic foot of concrete or cementitious material.

1 61. (original) The composition of claim 60, wherein said concrete or
2 cementitious material comprises between about 0.01 gram moles of lithium nitrate per
3 cubic foot of concrete to about 0.1 gram moles of lithium nitrate per cubic foot of
4 concrete or cementitious material.

1 62. (original) The composition of claim 60, wherein said concrete or
2 cementitious material comprises between about 0.1 gram moles of lithium nitrate per
3 cubic foot of concrete to about 1 gram moles of lithium nitrate per cubic foot of
4 concrete.

1 63. (original) The composition of claim 60, wherein said concrete or
2 cementitious material comprises between about 1 gram moles of lithium nitrate per
3 cubic foot of concrete to about 10 gram moles of lithium nitrate per cubic foot of
4 concrete or cementitious material.

1 64. (original) The composition of claim 60, wherein said concrete or
2 cementitious material comprises between about 10 gram moles of lithium nitrate per
3 cubic foot of concrete to about 100 gram moles of lithium nitrate per cubic foot of
4 concrete or cementitious material.

1 | 65. (currently amended) The ~~method~~composition of claim 60, wherein said
2 concrete or cementitious material comprises about 0.815 gram moles of lithium nitrate
3 per cubic foot of grout or cementitious material.

1 66. (original) A composition comprising:
2 a grout comprising between about 0.01 gram moles of lithium nitrate per cubic
3 foot of grout to about 100 gram moles of lithium nitrate per cubic foot of grout.

1 67. (original) The composition of claim 66, wherein said grout comprises
2 between about 0.01 gram moles of lithium nitrate per cubic foot of grout and about 80
3 gram moles of lithium nitrate per cubic foot of grout.

1 68. (original) The composition of claim 66, wherein said grout comprises
2 between about 0.01 gram moles of lithium nitrate per cubic foot of grout and about 82
3 gram moles of lithium nitrate per cubic foot of grout.

1 | 69. (currently amended) The ~~method~~composition of claim 66, wherein grout
2 comprises between about 0.01 gram moles of lithium nitrate per cubic foot of grout and
3 about 0.1 gram moles of lithium nitrate per cubic foot of grout.

1 | 70. (currently amended) The ~~method~~composition of claim 66, wherein said
2 grout between about 0.1 gram moles of lithium nitrate per cubic foot of grout and about
3 1 gram moles of lithium nitrate per cubic foot of grout.

1 | 71. (currently amended) The ~~method~~composition of claim 66, wherein said
2 grout comprises between about 1 gram moles of lithium nitrate per cubic foot of grout
3 and about 10 gram moles of lithium nitrate per cubic foot of grout.

1 | 72. (currently amended) The ~~method~~composition of claim 66, wherein said
2 grout comprises between about 10 gram moles of lithium nitrate per cubic foot of grout
3 and about 100 gram moles of lithium nitrate per cubic foot of grout.

1 | 73. (currently amended) The ~~method~~composition of claim 66, wherein said
2 grout comprises about 0.815 gram moles of lithium nitrate per cubic foot of grout.

1 74. (original) A composition comprising:
2 a mortar comprising between about 0.01 gram moles of lithium nitrate per cubic

3 foot of mortar to about 100 gram moles of lithium nitrate per cubic foot of mortar.

1 75. (original) The composition of claim 74, wherein said mortar comprises
2 between about 0.01 gram moles of lithium nitrate per cubic foot of mortar and about 80
3 gram moles of lithium nitrate per cubic foot of mortar.

1 76. (original) The composition of claim 74, wherein said mortar comprises
2 between about 0.01 gram moles of lithium nitrate per cubic foot of mortar and about 82
3 gram moles of lithium nitrate per cubic foot of mortar.

1 | 77. (currently amended) The ~~method~~composition of claim 74, wherein mortar
2 comprises between about 0.01 gram moles of lithium nitrate per cubic foot of mortar
3 and about 0.1 gram moles of lithium nitrate per cubic foot of mortar.

1 | 78. (currently amended) The ~~method~~composition of claim 74, wherein said
2 mortar between about 0.1 gram moles of lithium nitrate per cubic foot of mortar and
3 about 1 gram moles of lithium nitrate per cubic foot of mortar.

1 | 79. (currently amended) The ~~method~~composition of claim 74, wherein said
2 mortar comprises between about 1 gram moles of lithium nitrate per cubic foot of
3 mortar and about 10 gram moles of lithium nitrate per cubic foot of mortar.

1 | 80. (currently amended) The ~~method~~composition of claim 74, wherein said
2 mortar comprises between about 10 gram moles of lithium nitrate per cubic foot of
3 mortar and about 100 gram moles of lithium nitrate per cubic foot of mortar.

1 | 81. (currently amended) The ~~method~~composition of claim 74, wherein said
2 mortar comprises about 0.815 gram moles of lithium nitrate per cubic foot of mortar.

1 82. (original) A composition comprising:
2 a cementitious material comprising an effective amount lithium nitrate per
3 cubic foot of cementitious material for inhibiting the corrosion of metals embedded in
4 cementitious material.